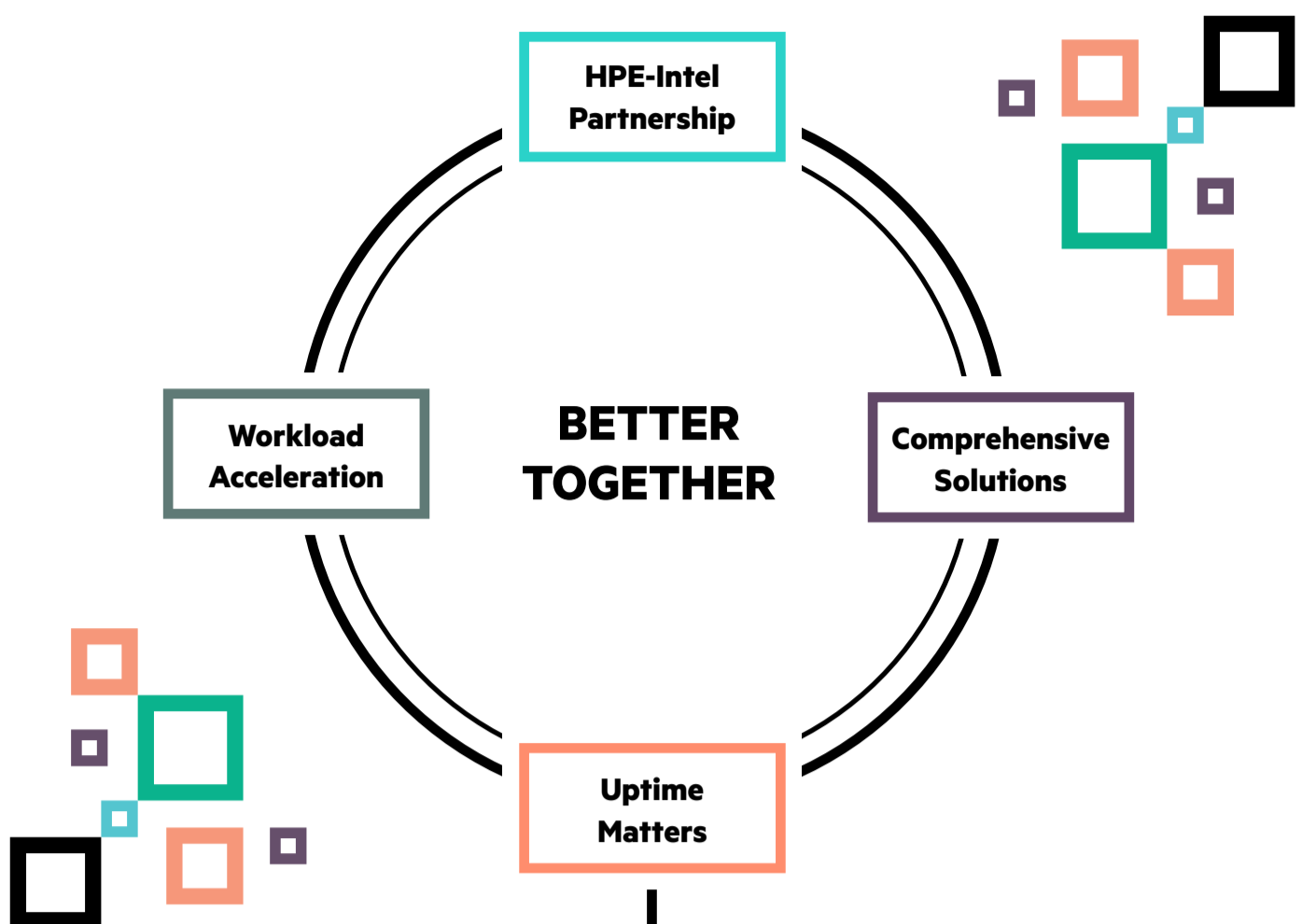


HPE high-performance solutions with Intel® technology

Intelligent integration, seamless connectivity, deep learning-optimized...

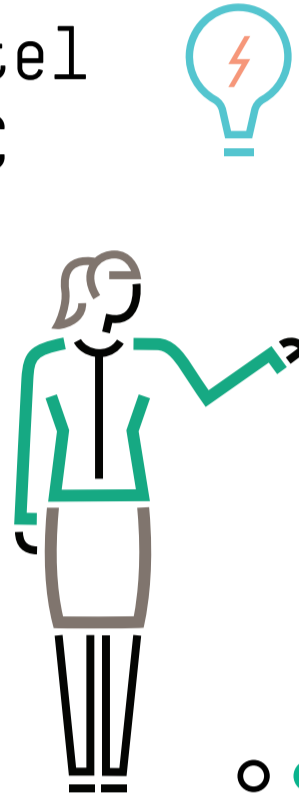


HPE-Intel Partnership

- Innovative, highly-secure solutions from two industry pioneers (see stat box)
- HPE systems with Second Generation Intel® Xeon® Scalable processors and Intel® Omni-Path Architecture® (Intel OPA) fabric yield industry-leading performance per rack unit³
- Broad family of HPC systems and consumption models
- Validated configurations tailored for diverse customer workloads
- HPE Centers of Excellence optimize solutions and test new technologies

HPE & Intel #1 in HPC

- 35.7% worldwide market share in HPC servers¹
- 96% of HPE Top500 system use Intel technologies²



Up to 57%

Power and cooling cost reductions with Intel OPA compared to leading alternative fabric⁴



Comprehensive Solutions

- **Broad portfolio:** Optimized systems and technologies
- **Business resilience:** No-compromise security from HPE Silicon Root of Trust to Intel® Threat Detection Technology
- **Optimal Cluster Performance:** Intel OPA enables low latency, high performance HPE Gen10 clusters with Second Generation Intel Xeon Scalable processors
- **Diverse architectures:** Workload-optimized fabric configurations available, including Enhanced Hypercube

Uptime Matters

- Robust system design across the diverse portfolio of servers and storage
- Protect against and correct DRAM failures with HPE SmartMemory and Fast Fault Tolerance
- Safeguard fabric integrity with Intel OPA Packet Integrity Protection and Dynamic Lane Scaling

Up to 85%

Annual crash rate reduction

92 Trillion Hours

Intel OPA average time between end-to-end retries (i.e. effectively never)⁵



Up to 3x

deep learning throughput boost via Intel Deep Learning Boost (Vector Neural Network Instructions) compared to first generation Intel Xeon Scalable CPUs



Workload Acceleration

- Accelerated performance: HPE Gen10 servers and Intel Xeon Scalable Processors⁶
- 9% performance improvements via HPE Workload Matching
- 12% increase in Intel processor frequency via HPE Jitter Smoothing
- 14% higher performance with HPE Core Boosting
- Speed up AI workloads with HPE Gen10 servers and the Intel Deep Learning Boost
- Prioritize workloads with Intel OPA Traffic Flow Optimization - high-priority traffic moves to the "head of the line"

[Read Ebook](#)

¹Hewlett Packard Enterprise remained the HPC server system global market leader by capturing 30.7% of worldwide HPC server system revenue.* (Next closest competitor is at 18.0%) *HPC Server Market Jumps 27.6% in 2020/18* Inside HPC (Sept. 27, 2018)
²Nov. 2018 Top500 list, <https://www.top500.org/statistics/list/>
³https://www.hpcwire.com/solution_content/hpe/government-academia/hpe-systems-with-intel-omni-path-architected-for-value-and-accessible-high-performance-computing/
⁴Power usage and cooling data for Intel and Mellanox interconnects from product user manuals. 750-node HPC cluster consumes 26.7 kWhrs vs. 116 kWhrs, consumes \$73,000 vs. \$31,000 three-year cooling costs.
⁵Intel Omni-Path HP-CAST, June 2018
⁶Dynamically tune performance HPE Intelligent System Tuning <https://psnow.ext.hpe.com/partner/doc/a00018328enw?from=app§ion=search>

[Learn more](#)